



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

trating the relations of genera and species, the former enclosing the latter and explaining in a visible shape their interrelations and the deductions made therefrom. All these arguments presuppose that lines can be made to return to themselves; they are based on the condition that lines may lie in one and the same plane and may constitute figures bound up in definite limits. They presuppose a space not necessarily Euclidean but of a continuity which does not permit the contents to skip out into a third dimension. It is true that the logical diagrams are mere illustrations, not proofs, but if illustrations do not hold good, we have no ground for classifying objects or making any generalization. The idea of form is at the bottom of all thinking, and the assumption of the possibility of a sameness of forms alone justifies us in speaking of "*All A*" and drawing the conclusion that if all A's are B then every single A is B.

P. C.

CURRENT PERIODICALS.

In *Mind* for April, S. Alexander continues his paper on "Collective Willing and Truth." J. S. Mackenzie, in a paper entitled "A Sketch of a Philosophy of Order," advocates, "in a brief and somewhat tentative fashion, a point of view that has at least proved helpful to myself in the effort to understand these apparently simple but in reality most difficult problems"—the nature of truth and error and of relations. "It has been my endeavor," he says in conclusion, "to exhibit certain fundamental conceptions as being involved even in the simplest facts of experience; and to show that reflection on them leads us gradually to the recognition of a certain ideal order, which is at least the foundation of our moral aspirations, and may perhaps serve as a basis for an idealistic or spiritual interpretation of the universe. My contention is that there is nothing even in sense which does not already imply something of the nature of an ordered universe. Such an idealism does not seem to be in any way opposed to what is commonly called realism; and it seems to me that we may find in this method of treatment a possible conciliation between views that are usually regarded as antagonistic." The Rev. Oliver Quick has an article on "Bergson's *Creative Evolution* and the Individual." Howard V. Knox writes an appreciation of "William James and his Philosophy," and concludes: "After all, James might well be content to rest his title to fame on his having translated the question 'What makes knowledge possible?' into

the question 'What makes knowledge credible, and conduct possible?' That is what in the history of philosophy will be known as James's Answer to Kant; and there are those who believe that it will rank as more epoch-making than Kant's irrelevant Answer to Hume. In a word, to James belongs the glory of having first divined the Secret of the Plain Man, and ministered to his desire for a knowledge that is relevant to action and to life." In the "Discussions," F. C. S. Schiller replies to his reviewer R. F. A. Hoernlé, L. S. Stebbing replies to his critic F. C. S. Schiller, and G. R. F. Ross and C. H. Rieber have some critical remarks on a logical article by C. E. Hicks in *Mind* for 1912 on Euler's circles and inversion. A short note at the end by C. D. Broad on Zeno's puzzle of Achilles and the Tortoise is interesting since "it is important, even at this time of day, to settle the controversy finally, because it and Zeno's other paradoxes have become the happy hunting-ground of Bergsonians and like contemnners of the human intellect." Russell's version of the puzzle in his *Principles of Mathematics* is that the supporters of the Achilles paradox are trying to prove that the course of the tortoise can never be a proper part of that of Achilles because the construction shows that each has the same number of points; while an infinite class and a proper part of itself can have the same number of terms (Cantor and Dedekind). But Broad thinks that the difficulty which many intelligent persons feel lies in the supporters' advocacy of the plausible but false proposition that "what is beyond every one of an infinite series of points must be infinitely beyond the first point of the series."

* * *

In the *Revue de Métaphysique et de Morale* for March, Gustave Belot begins his article on the idea of God and atheism from the critical and social points of view by announcing that his thesis would have reduced him to penury a hundred years ago; it would have brought him to the Bastille two hundred years ago; and would, perhaps, have brought him to the stake 300 or 350 years ago. And yet his thesis is not very subversive: his object is to show that the fear of atheism is chimerical. "Every new affirmation of God presupposes some provisory and relative atheism. The fear of atheism is perhaps the most profound atheism." Albert Rivaud has a long and detailed article on Paul Tannery, historian of ancient science. Tannery undertook to study in a general manner the history of ancient science; and pursued simultaneously four series of distinct but connected researches: on the history of mathematics and their

applications, on the history of astronomy and physics, and on ancient metrology. Death interrupted him just when he was beginning the history of ancient medicine. It is interesting to see that Tannery maintained in *Pour l'Histoire de la Science Hellène*, Paris, 1887, pp. 249, 250, 258, that the well-known paradoxes of Zeno are not sophisms, but are clear and irrefutable arguments against Pythagoreanism. Léon Robin maintains that Plato was not, as he is too often represented, one of the most brilliant legislators of the country of Utopia, but a philosophical and scientific social reformer. Louis Couturat points out that the logical problem raised by Ginzberg in the *Revue* for January has been long resolved by logisticians. Couturat also has a long paper on logistics and intuition in which he points out the error of people like Henri Poincaré and Pierre Boutroux in a way that may be summed up: "The error of the adversaries of logistics arises from the fact that they oppose logic to discovery." Cf. *The Monist* for October, 1912. Léon Brunschvicg discusses the practical question of the organization of the republic according to the works of Henri Chardon on administrative reform.

In the *Revue* for May, Pierre Boutroux has an article on the object and method of mathematical analysis, which forms three chapters of a forthcoming work. These three chapters are on the origins and rôle of algebra, the progress of algebraical synthesis, and analysis. G. Gastinel has a long and critical article on esthetics and sociology, in which he takes as text the *Introduction à l'Esthétique* of Charles Lalo. François d'Hautefeuille, in a paper on the inner life, which is a sequel to a previous paper whose object it was to show the insufficiency of the sociological conception of morals—which rises from inaptitude to place oneself at the point of view of the inner life—, tries to penetrate the importance of this life and understand its nature and the close union of its domain to that of morals. A. Mamelet contributes the fourth and last of his articles on the philosophy of Georg Simmel. Finally, G. Cantecor discusses the question of suicide for the purpose of comparing religious and lay morals.

* * *

In "*Scientia*" (*Rivista di Scienza*) for May, the first article is by Bertrand Russell "On the Notion of Cause." The law of causality, he says, is—at least as usually stated by philosophers—false and is not employed in science. Indeed, "the word 'cause' is so inextricably bound up with misleading associations as to make its complete extrusion from the philosophical vocabulary desirable.

....The law of causality, I believe, like much that passes muster among philosophers, is a relic of a bygone age, surviving, like the monarchy, only because it is erroneously supposed to do no harm." Then there follows a most amusing criticism of the definitions of terms relating to the subject in Baldwin's *Dictionary*. Scientific laws, instead of stating that one event A is always followed by another event B, state functional relations between certain events at certain times and other events at earlier or later times or at the same time. In the case of a system of gravitating particles, "certain differential equations can be found, which hold at every instant for every particle of the system, and which, given the configuration and velocities at one instant, or the configurations at two instants, render the configuration at any other earlier or later instant theoretically calculable. That is to say, the configuration at any instant is a function of that instant and the configurations at two given instants. This statement holds throughout physics, and not only in the special case of gravitation. But there is nothing that could be properly called 'cause' and nothing that could be properly called 'effect' in such a system." On this point, we may refer to Russell's *Principles of Mathematics*, Cambridge, 1903, pages 477—479. The "law of causality" seems to be capable of translation by the principle: "There is a constant relation between the state of the universe at any instant and the rate of change in the rate at which any part of the universe is changing at that instant, and this relation is many-one, i. e., such that the rate of change in the rate of change is determinate when the state of the universe is given." This principle cannot be considered as *a priori*. Calling the above certain events at certain times "determinants," the author sums up his further results as follows: "We found that a system with one set of determinants may very likely have other sets of a quite different kind, that, for example, a mechanically determined system may also be teleologically or volitionally determined. Finally we considered the problem of free will: here we found that the reasons for supposing volitions to be determined are strong but not conclusive, and we decided that even if volitions are mechanically determined, that is no reason for denying freedom in the sense revealed by introspection, or for supposing that mechanical events are not determined by volitions. The problem of free will *versus* determinism is therefore, if we were right, mainly illusory, but in part not yet capable of being decisively solved."

Emmanuel de Martonne points out that the climate has at least as

much effect as the sub-soil in putting the soil into that relief which is usually explained geologically. Frederick Soddy, in an article on "The Periodic Law from the Standpoint of Radioactivity," gives an interesting account of how, in 1913, and principally as a consequence of the work of A. S. Russell, G. von Hevesy, K. Fajano, Soddy himself, and A. Fleck, a great generalization has been made with regard to the position in the periodic classification occupied by the 34 radioelements now recognized. This advance sheds a flood of new light on the nature of the periodic law and already more than half answers the riddle underlying that law. The generalization in question is: All members occupying the same place in the Periodic Table are non-separable from one another by chemical methods, and are chemically identical with one another, though their atomic weights vary over several units. Such groups of non-separable elements could not be separately recognized unless they were actually in the process of change the one into the other. A. Prenant gives an account of the physical, as opposed to the vitalistic, explanations of cell-division (mitosis), and concludes that every one of these explanations leave something to be desired. Franz Oppenheimer gives a criticism of Marx's theory of plus value. G. Cardinali, in an essay on the repercussions of imperialism on the inner life of Rome, points out the one-sidedness of historians, and tries to make it easier for one to get a clear view of the essential values and characteristics of the period of the Roman Empire. V. Cornetz replies to some points in an article by H. Piéron on orientation with ants. Michele Gortani gives an account of recent progress in geodynamics. Reviews, etc. fill up the rest of the number.

φ

CORRESPONDENCE.

DISCUSSION BY THE FRENCH "PLASMOGENISTS" ON THE ORIGIN OF LIFE.

In the field of spontaneous generation, we have reopened once for all high roads across which backward, retrogressive minds had raised barricades declared by them insurmountable!

Albert and Alexander Mary.

When in the year 1883, in his monthly illustrated review, *L'Astronomie*, Camille Flammarion replied to Mr. Faye concerning the grand problem of the existence of multitudinous inhabited worlds in the cosmos, he affirmed that all the sidereal spheres passed through